matician and worker in the pedagogy of mathematics (Laisant); of a professor of philosophy (Bertrand); of the head of the Pasteur Institute (Duclaux); of a general writer on a wide range of topics (Le Bon); The are all animated by the same spirit and urge: (*a*) the fundamental importance of the *proper* study of mathematics; (*b*) the concrete origin and the experimental relations of the subject; (*c*) the deadening effects of teaching on an abstract basis; and (*d*) the salutary results of beginning with the concrete.

In an address on "The General Definitions of Mathematics" delivered at the Musée Pédagogique, January 21, 1904, Mr. H. Poincaré made remarks of the same trend, advising, for example, the definition of parallels by a square sliding along a ruler and the use of the pantagraph in the theory of similarity.

No recent French publication has come to my notice defending the contradictory assertions, so that it seems safe to say that the French expressions of theoretic thoughts on the teaching of mathematics trend today in the same general direction as the American movement for the introduction of what have been called "laboratory methods" into teaching of mathematics. The French views cited relate exclusively to the *method* of arranging and developing the subject-matter; with us the term "laboratory methods" connotes also something as to the mode of handling the class. In view of the strict, conventual discipline of the schools, and the fact that pupils, teachers, and textbook writers alike are subject to the absolute domination of detailed curricula, uniform throughout the republic, is it not to be expected that French writers will waste their energies in advocating anything analogous. Numerous voices have been raised against both the rigor of the discipline and the tyranny of the programs (for example, in the Inquest of 1900, and by Laisant and Le Bon), but the outlook for an early and radical change is not good; and until a change in the general policy opens the door, the consideration of details is, of course, out of the question. Even in physics and chemistry, laboratory work by pupils was unknown before the introduction of the programs of 1902.

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Education as Adjustment. By M. V. O'SHEA. New York: Longmans, Green & Co. Pp. 313.

Education as Adjustment is worth reading for three reasons. The first of these is that the author has collected from many sources a mass of valuable facts which are of sufficient concreteness and definiteness to make the volume a good book of reference. The facts are of value because they are detailed and to the point, and therefore scientific. The author follows his own precept: "The greatest need in education today is the development of a *scientific* temper among teachers and the adoption of scientific method by all who treat of educational questions (p. viii). However, as a reference book the volume might have been improved if the bibliography appended, consisting of 220 titles, could have had notes added to show what the author had found of value in each reference, in some such way as Miss Tanner has done in *The Child.* Sometimes one suspects that bibliographies are added as credentials and not for use. In the second place, in the most careful consideration that has yet appeared on the subject, it presents the case against formal discipline. The arguments are based upon biological and psychological grounds. Much use is made of facts such as Thorndike has made us familiar with (chap. 13). But it is doubtful if science has yet enough

data with which to lay the ghost. It may be that the educational world is clinging to a fetich; but practical experience seems to indicate that there is more value in formal discipline than the author would have us believe. The chapter is well worth reading. The third point of value is that the author approaches education from a certain standpoint in a more serious way than has heretofore been done, I think. He secures this standpoint after a preliminary search through experience, and upon this as basis defines education as a process of "adjustment." We are familiar with the term in the use of Spencer and the evolutionists, where the aim of the organic life is said to be to secure more and more perfect adjustment to environment. This is the standpoint of the book, I believe. For example: "Each member thus becomes adapted to all features of his environment" (p. 141); or, "The ideal would be to keep all under the influences of the school during the entire developmental period, when the individual is in a plastic condition and easily molded after a given pattern" (p. 130); or, "Everything which goes to make up their daily lives must be adapted to each individual" (p. 281). Of course, this brings up the other phase of educational theory, self-development and self-realization, the gaining control of environment, not the adjusting to environment. And though the author meets this by widening the meaning of "adjustment" (pp. 99–101), one feels that he either is unfortunate in the use of a word with such pernicious associations, throwing the reader off the trail of his real meaning, or he is at heart in sympathy with the narrower meaning, and widens it merely in a formal way when it is brought prominently to his attention, to lapse into the habitual meaning when he is not thinking of it. One implication of a theory of adjustment is a functional theory in education, which would hold that nothing shall be taught which is not of value for adjustment. It is saved from crass utilitarianism by a refining of values to include adjustment to the æsthetic, moral, social, religious, and intellectual environment.

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